



Canadian Institute of Nuclear Physics Institut canadien de physique nucléaire

November 2015 Newsletter

The Canadian Institute of Nuclear Physics (CINP) is a formal organization of the Canadian nuclear physics research community to promote excellence in nuclear research and education, and to advocate the interests and goals of the community both domestically and abroad.

1. CINP Board of Directors (2015-16)

The CINP Institutional Members had their annual meeting via teleconference on May 20. One of the business was to elect two new Board members. The new Board is listed below, along with their assigned responsibilities.

Name	Institution	Role	E-mail	Term Ends
Rituparna Kanungo	Saint Mary's University	President	ritu@triumf.ca	June, 2016
Jean Barrette	McGill University		jean.barrette@mcgill.ca	June, 2016
Gerald Gwinner	University of Manitoba	Vice-President	gerald.gwinner@umanitoba.ca	June, 2017
David Hornidge	Mt. Allison University		dhornidge@mta.ca	June, 2018
Jeffery Martin	University of Winnipeg	Secretary	j.martin@uwinnipeg.ca	June, 2017
Jens Dilling	TRIUMF		jdilling@triumf.ca	June, 2018

We thank outgoing Board member Paul Garrett for many years of service to the CINP. He assisted with the founding of the Institute in 2008 and has served as Treasurer since then.

2. New CINP Treasurer

The Board is pleased to announce the appointment of Dr. Sonia Bacca, TRIUMF, as CINP Treasurer (non-Board member) for a five year term ending June 30, 2020. The transfer of the CINP's NSERC grant has now been completed, and the transfer of the CINP's private account will proceed in the near future, pending the finalization of a multi-year audit of these funds.

Please note that all invoices and payments will now be handled by Sonia. She may be contacted at:

Dr. Sonia Bacca
TRIUMF
4004 Wesbrook Mall
Vancouver, BC V6T 2A3
email: bacca@triumf.ca

3. NSERC Support for CINP

The CINP gratefully acknowledges support from NSERC in the form of a Subatomic Physics Major Resources Support (SAP-MRS) grant. This grant supports the CINP's external conference support program, the undergraduate research scholarship program, expenses for the Long Range Plan, and other initiatives. The CINP MRS grant was renewed for 5 years in the 2015 competition with a moderate increase in funds being granted. The grant for 2015-16 is \$42,000.

4. NSERC Subatomic Physics Long Range Plan 2017-21 (www.lrp2017.ca)

Subatomic Physics
Long Range Plan 2017-2021

Physique Subatomique
Plan à Long Terme 2017-2021

We thank the many members of the Canadian nuclear physics research community who were able to attend the CINP Town Hall meeting at the University of Alberta, June 13-14, 2015. As you know, the long-range plan is crucial for the proper operation of the Subatomic Physics Envelope, which is the source of NSERC funding to our community.

Following the town hall meeting, the CINP Brief Committee: Garth Huber (Chair and Chief Editor), Iris Dillmann (Nuclear Astrophysics), Charles Gale (Hadrons/QCD), Adam Garnsworthy (Nuclear Structure), Gerald Gwinner (Symmetries), Juliette Mammei (Education and Training) put together an extensive written brief which we believe reflects the priorities and aspirations of the community. You can download a copy of this brief from:

http://cinp.phys.uregina.ca/sites/cinp/files/sites/cinp/files/CINP_Brief_Oct2015.pdf

The NSERC Subatomic Physics Long Range Planning Committee (LRPC) will hold a Town Hall Meeting on Saturday, December 12, 2015 in Vancouver. The purpose of this meeting is for the LRPC to report on its progress, report on news from NSERC, and to collect feedback. The LRPC encourages written comments on the CINP and IPP briefs, which should be sent to Sarah Overington (sarah.overington@nserc-crns.gc.ca) no later than December 4, 2015, noon EST. The comments will be posted publicly on the LRP website and those submitting will be offered the opportunity for a short presentation at the Town Hall meeting. In addition, there will time allocated to open discussion.

We encourage you to attend this meeting in-person if possible. Remote participation in the meeting via audio/video conferencing is also being arranged. As the logistical details for the Town Hall meeting are confirmed, they will be posted at:

<http://www.lrp2017.ca/events/townhall2015>

5. Consultations with External Agencies

The CINP is an advocate and representative of the Canadian nuclear physics community and is asked to attend various meetings or make presentations on its behalf. Some recent or forthcoming activities include:

- In addition to collecting nuclear physics community input in the form of the the CINP Brief (above), the CINP Executive Director is an ex-officio member of the LRPC and attends all meetings as an observer. Our hope is that this will lead to a transparent and fair LRP. If at any point you have questions or concerns about the LRP, please do not hesitate to contact Garth Huber (contact information at the end of this newsletter), as he is in frequent communication with NSERC throughout the entire process.

- The CINP and IPP presented the joint document on *The Context and Environment of Canadian Subatomic Physics Research at Canadian Universities* to the Subatomic Physics Evaluation Section (SAPES) at their November 3 fall policy meeting. This document is needed because many SAPES members are not very familiar with the Canadian research funding process and the research environment at Canadian universities. We are interested in receiving your specific suggestions to improve next year's version. The report can be downloaded from: <http://cinp.phys.uregina.ca/node/219>
- The CINP will make a 15 minute in-camera presentation to SAPES on *The Breadth of Canadian Nuclear Physics Research and Important Current and Future Priorities* at Large Projects Day, scheduled for March 6, 2016 at NSERC headquarters in Ottawa. Please send information on your significant 2015 research highlights, new research capabilities, or honors received, to the CINP Executive Director, Garth Huber, who will prepare the presentation from your submissions and relevant information from the most recent Subatomic Physics Long Range Plan. You may find a copy of last year's presentation at: http://cinp.phys.uregina.ca/sites/cinp/files/sites/cinp/files/CINP_LPD2015.pdf

6. Nuclear Science Week (submitted by Jason Donev)



The first year of the Canadian Nuclear Science Week (October 19-24, 2015) was a success. Events were held across Canada and were well received. At the University of Calgary, Jason Donev ran an event, with close to 100 people attending four public lectures on the use of radiation for medical purposes, quark stars,

Nuclear Science Week isotopes in the periodic table and the recent Canadian Nobel prize for neutrinos. TRIUMF held a public talk on Oct 24 which was well received. In Saskatoon, the Fedoruk Centre for Nuclear Innovation held a public event called *NuclearFacts* with 65 people attending. At the University of Regina, 55 people showed up on the evening of Oct 20 for a public lecture and a display of some of the medical imaging detector work they are doing for the Fedoruk Centre. At Acadia University, Svetlana Barkanova presented to the public about the interesting Canadian nuclear physics research that has been done.



There is wide agreement that we should do this again, and we intend to do a similar event with more participation next year. If you are interested in hosting something next fall, please contact Jason Donev at jmdonev@ucalgary.ca for more information.



7. CUPC Student Conference Support

The CINP awarded four \$500 travel grants to support undergraduate students giving talks on nuclear physics related projects at the 2015 Canadian Undergraduate Physics Conference (CUPC) at Trent University in Peterborough, ON on October 22-25, 2015. The applications were evaluated by a committee: Juliette Mammei (Chair), Jean Barrette and Jens Dilling.

Student	Supervisor	CUPC Talk Title
Sanmeet Chahal (Ottawa)	Ruediger Picker (TRIUMF)	Simulations of the guide footprint for the TRIUMF Neutron Electric Dipole Moment (nEDM) experiment
Tait Du (Mt. Allison)	Khashayar Ghandi (Mt. Allison)	Investigation of the nuclear energy production cycle using spin polarization of positive muons.
Meg Morris (Mt. Allison)	David Hornidge (Mt. Allison)	Background simulations for experimental extraction of neutron scalar polarizabilities via Compton scattering
Hannah Stegen (Mt. Allison)	David Hornidge (Mt. Allison)	Neutron photo-pion amplitudes and quasi-free π^0 production from deuterium in the threshold region

The students were asked to acknowledge the financial support by the CINP in their presentation.

One student kindly included the following note with their travel receipts for the conference:
“Thank you very much for the funding, which allowed me to attend the Canadian Undergraduate Physics Conference. I had an amazing experience and benefited from so many aspects of the conference. The speakers were inspiring and I found the graduate and career panels extremely helpful. I was given the chance to talk to several graduate schools at the graduate fair and I look forward to staying in touch with all the fellow undergraduate physicists I became friends with. I really appreciate you giving me this opportunity and I am very thankful for your generosity.”

8. Winter Nuclear and Particle Physics Conference (WNPPC 2016)



The 53rd Winter Nuclear and Particle Physics Conference (WNPPC) will take place February 11-14, 2016, in Banff, Alberta. The WNPPC is a national meeting for the Canadian subatomic physics community, with a special focus on providing a forum for junior researchers (students and postdocs) and interaction with groups across Canada. The 2016 meeting is being organized by the University of British Columbia and TRIUMF, and will feature sessions focusing on the research areas of interest to the Canadian nuclear and particle physics community (both experimental and theoretical).

Important Deadlines:

December 13, 2015: Early registration deadline

December 13, 2015: Hotel room booking deadline

January 11, 2016: Abstract submission deadline

For more information, please consult the conference website: <http://wnppc.triumf.ca>

2016 WNPPC Graduate Student Travel Awards

The Canadian Institute of Nuclear Physics (CINP) is making available four graduate student travel awards to the 2016 WNPPC. Each award will be for up to \$500 towards student travel expenses. Students must be enrolled in graduate studies at a Canadian university and performing research in experimental or theoretical nuclear physics. The application deadline is January 11. For more information and application forms, please visit: <http://cinp.phys.uregina.ca/node/180>

9. CINP Conference Support

The CINP extends partial funding to workshops, meetings and conferences of broad relevance to nuclear physics in Canada. Requests are appraised against the mission and goals of the CINP, and funding is contingent upon satisfactorily showing that the event will further the aims of the CINP and be of benefit its members.

Application forms for external conference support are available from <http://cinp.phys.uregina.ca/node/22> and should be returned to the CINP Executive Director, Garth Huber. Once it is confirmed the necessary information is received, the Chair of the Scientific Working Group most closely related to the conference topic will be consulted, and a recommendation forwarded to the CINP Board for final approval.

We hope you will be able to attend the following CINF-sponsored conference:

DREB2016
The 9th international conference on Direct Reactions with Exotic Beams (DREB) 2016 will be held at Saint Mary's University, Halifax, Canada during July 11 - 15, 2016.

The scientific program will be devoted to the latest experimental and theoretical research and developments in nuclear reactions with exotic nuclei.

The topics will include :

- Exotic structures through direct reactions
- Shell evolution through direct reactions
- Spectroscopy of nuclear levels and nuclear shapes through direct reactions
- Probing the nuclear force through direct reactions
- Theoretical developments of direct reactions
- Nuclear astrophysics
- New instrumentation for direct reaction studies of exotic nuclei

The conference is jointly organized by Saint Mary's University (Halifax, Canada), Argonne National Laboratory (Argonne, USA) and TRIUMF (Vancouver, Canada).

Contact: dreb2016@conferences.triumf.ca
<http://conferences.triumf.ca/DREB2016/>

International Advisory Committee Members

N. Aoi, RIKEN, Japan	A. Macchiavelli, LLNL, USA
T. Aumann, TU Darmstadt, Germany	D. Morrey, MSU, USA
C. Bertulani, Texas A&M Univ., Commerce, USA	A. Moro, Univ. de Sevilla, Spain
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T. Nilsson, Chalmers Univ. of Tech., Sweden	H. Nishida, Univ. of Tsukuba, Japan
	Ye Yanlin, Peking Univ., China

Organizing Committee

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Paul Garrett, University of Guelph, Canada
Caleb Hoffman, Argonne National Laboratory, USA
Robert Janssens, Argonne National Laboratory, USA
Reiner Kruecken, TRIUMF/USC, Canada
Krzysztof Starosta, Simon Fraser University, Canada

The DREB conference is part of a biennial series with the previous meetings held in Darmstadt (2014), Pisa (2012), Tallahassee (2009), Wako (2007), East Lansing (2005), Surrey (2003), Orsay (2001) and East Lansing (1999).

The scientific program will be devoted to the latest experimental and theoretical research and developments in nuclear reactions with exotic nuclei. The topics will include :

- Exotic structures through direct reactions
- Shell evolution through direct reactions
- Spectroscopy of nuclear levels and nuclear shapes through direct reactions
- Probing the nuclear force through direct reactions
- Theoretical developments of direct reactions
- Nuclear astrophysics
- New instrumentation for direct reaction studies of exotic nuclei

For more information, please visit <http://conferences.triumf.ca/DREB2016/index.html>

10. DNP Program at 2016 CAP Congresses (submitted by Reiner Kruecken)

At the CAP Congress 2016 in Ottawa, the DNP will sponsor or co-sponsor the following parallel sessions:

- Neutrinoless Double Beta Decay I & II (jointly with PPD & DTP)
- Advances in Nuclear and Particle Physics Theory (jointly with PPD & DTP)
- Neutrino Physics (jointly with PPD & DTP)
- Testing Fundamental Symmetries I & II (jointly with PPD & DTP)
- Nuclear Structure I - III
- Hadronic Structure
- Nuclear Astrophysics
- Radiation Therapy (jointly with DMBP)

- Nuclear Physics in Medicine (jointly with DMPB & DIAP)

One of the plenary talks at the CAP Congress will be held by Professor Hendrik Schatz (NSCL/MSU), one of the world-leading experts in Nuclear Astrophysics and Director of the Joint Institute for Nuclear Astrophysics - Center for the Evolution of the Elements (JINA-CEE).

CINP Executive Director:

If you require information about any CINP programs, please do not hesitate to contact:

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CINP Website Server:

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CINP Institutional Members:

Saint Mary's University
Mt. Allison University
McGill University
University of Guelph
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University of Winnipeg
University of Regina
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